Remarks

Claims 1-16 are pending and at issue in the present application.

The applicants respectfully traverse the rejections of the claims at issue under 35 U.S.C. §103(a) as obvious over various combinations of Bauder et al. U.S. Patent No. 7,203,247 ("Bauder '247"), Bauder et al. U.S. Patent No. 6,853,246 ("Bauder '246"), Schrader et al. U.S. Patent No. 7,016,431, McFarland et al. U.S. Publication No. 2002/0186796, and Khayrallah U.S. Patent No. 6,320,919.

In the pending Office action, the examiner concedes that Bauder '247 does not disclose the transmission of a linearization training sequence, as recited by the claims at issue, and introduces Bauder '246 at column 7, lines 10-25 to supply such deficiency. However, Bauder '246 does not disclose the transmission of a linearization training sequence. Rather, Bauder '246 discloses a transmitter 100 that includes an adaptive predistortion system ("APS") that further includes a coefficient update subsystem ("CUS") and a predistortion filter subsystem ("PFS"). See Bauder '246 at column 3, line 66 to column 4, line 10. The CUS is coupled to an output of a power amplifier ("PA") of the transmitter 100 and is "configured to update a set of predistortion coefficients using an iterative process based on an output signal of the power amplifier PA." Bauder '246 at column 4, lines 1-5. The PFS is coupled to the CUS and is "configured to employ the set of predistortion coefficients to reduce a level of distortion associated with the nonlinear amplification characteristic of the power amplifier PA." Bauder '246 at column 4, lines 5-10. More specifically, the predistortion coefficients are applied to a predistortion polynomial that is utilized to reduce the level of distortion in the transmitter 100. Bauder '246 goes on to disclose algorithms used in the iterative process to update the predistortion coefficients. The portions of Bauder '246 identified by the examiner (column 7, lines 10-25) merely disclose two training approaches that can be used to estimate the predistortion polynomial, i.e., the iterative process can be performed on a "specially designed sequence or signal" or a "transmitted signal generated during normal transceiver operation" to estimate the coefficients of the predistortion polynomial. Bauder '246 teaches that these two options are exclusive one from the other. In addition, there is no disclosure or suggestion in Bauder '246 that either the "specially designed sequence" or the "transmitted signal generated during normal

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transceiver operation" includes a linearization training sequence. Further, there is no support for the contention that the "specially designed sequence" is even transmitted. Rather, Bauder '246 teaches that, "[u]sing the second approach, updating the predistortion coefficients can be done whenever there is a signal to be transmitted," which appears to teach away from the transmission of "a specially designed sequence" for linearization of the power amplifier.

Still further, there is no disclosure or suggestion in Bauder '246 that the predistortion coefficients/polynomial that are modified by the CUS and used by the PFS to reduce distortion in the output of the transmitter 100 are transmitted by the transmitter 100. Instead, such coefficients/polynomial are used entirely within the transmitter 100 and, more specifically, entirely within the APS of the transmitter 100. Therefore, the examiner's argument that Bauder '246 discloses the transmission of a linearization training sequence is clearly erroneous and must be withdrawn. Further, none of the other applied references supplies such deficiencies of Bauder '247 and Bauder '246. Therefore, the claims at issue should be allowable over the applied references, notice of which is respectfully requested.

Additionally, the examiner has not established a *prima facie* case that the applied art alone or in combination discloses or suggests the limitation recited by the claims at issue that "*the linearization training sequence is included in a sequence of symbols that is also further designed to allow the adjusting of at least one parameter of a radiofrequency receiver of a second equipment of the radiocommunication system with which the first equipment communicates.*" The examiner asserts, at the bottom of page 4 and top of page 5 of the Office action, that the applied references make it obvious that a linearization training sequence and an automatic gain control sequence could be both separately present and concatenated in a signal transmitted by the transmitter. However, the claimed subject-matter clearly distinguishes from a simple concatenation of two different sequences sent for different purposes. Indeed, the claims require a linearization training sequence that is included in a sequence that is further designed to allow the adjustment of at least one parameter of a radio receiver of a second equipment, for instance, an automatic gain control sequence used for controlling a gain of an input amplifier of the receiver of the second equipment. Stated otherwise, at least part of the sequence of symbols that is transmitted has a dual function. For example, a first

function of linearization training symbols for the linearization of the power amplifier of the transmitter, and a second function of automatic gain control symbols for the automatic gain control of the input amplifier of the receiver. This a unique and advantageous combination of functions performed by one and the same sequence of symbols emitted by the transmitter. This feature recited by claims 1-16 is not disclosed or suggested by any combination of the applied references and for this additional reason the applicants respectfully request reconsideration and withdrawal of the pending rejections of claims 1-16.

For at least the foregoing reasons, reconsideration and withdrawal of the rejections of claims 1-16 and allowance of all the claims at issue are respectfully requested.

If there are any issues remaining that can be resolved by telephone, the examiner is invited to call the undersigned.

Deposit Account Authorization

The Commissioner is hereby authorized to charge any deficiency in any amount enclosed or any additional fees, which may be required during the pendency of this application under 37 CFR 1.16 or 1.17, except issue fees, to Deposit Account No. 50-1903.

Respectfully submitted,

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